

Marked-Up Copy of Amended Claims Showing Changes Being Made

1. (Amended) A system for simulating movement of a medical device in a body cavity or lumen of a patient, comprising:
 - (a) a medical device comprising a first end for manipulation by a user and a portion comprising a second end insertable into a simulated body cavity or body lumen in a manikin; and
 - (b) a manikin comprising an interface for receiving the portion comprising the second end and for interfacing with a simulated body cavity or lumen within the manikin, wherein the interface comprises a directional force feedback mechanism for exerting a directional force on the medical device in response to a feedback signal received by the force feedback mechanism;
wherein the system models interactions between the device and the body cavity or lumen in three-dimensions.
11. (Amended) The system according to claim 9, wherein the [system] manikin further comprises a tracking unit comprising a light source, a signal processing circuit, and one or more optical sensors, wherein the tracking unit is placed within the interface in optical communication with the device when it is inserted into the cavity or lumen.
- [20.] 21 (Amended) The system according to claim 19, further comprising a simulated scanning display for displaying a two-dimensional image of the simulated body cavity or lumen.
- [21.] 22. (Amended) The system according to claim [20] 21, wherein the simulated scanning

display is part of a simulated scanning device.

[22.] 23. (Amended) The system according to claim [21] 22, wherein the simulated scanning device is simulating an x-ray imaging system.

[23.] 24. (Amended) The system according to claim [21] 22, wherein the simulated scanning device and scanning display are coupled to a movable C-arm within scanning distance of the manikin.

[24.] 25 (Amended) The system according to claim 1, further comprising a re-configurable control panel for performing one or more of: image acquisition selection; image display; manipulating a table on which the manikin is placed; manipulating the position of a simulated scanning device relative to the manikin; and control of one or more shutter devices for limiting a field of view of a scanning device placed within scanning distance of the manikin.

[25.] 26 (Amended) The system according to claim 1 or 20, further comprising a monitoring station, the monitoring station comprising a second user device connectable to the network and comprising a second display interface for enabling a second user to monitor the movement of the medical device within the simulated body cavity or lumen.

[26.] 27 (Amended) The system according to claim [25] 26, wherein the second display interface of the monitoring station displays selectable options enabling the second user to select or change one or more anatomical and/or physiological parameters of the simulated body cavity or lumen, and wherein the selection causes the three-dimensional image of the simulated body cavity or lumen displayed to the first user to change to reflect the changed anatomical and/or physiological parameters.

[27.] 28 (Amended) The system according to claim 20, wherein the system is connectable to a database of patient images and/or medical data.

[28.] 29 (Amended) The system according to claim [25] 26, wherein the system is connectable to a database of patient images and/or medical data.

[29.] 30 (Amended) The system according to claim [27] 28, wherein the patient images comprise images of a body cavity or lumen from a patient affected by a pathology.

[30.] 31 (Amended) The system according to claim [28] 29, wherein the patient images comprise images of a body cavity or lumen from a patient affected by a pathology.

[31.] 32 (Amended) The system according to claim [21] 22, further comprising at least one foot-activation switch for activating or collimating the simulated scanning device, image display or table movement.

33. (Amended) The system according to claim [27] 28, wherein the first user display interface provides access to the database and wherein, in response to accessing, the system displays an image and/or medical data on the first user display interface.

34. (Amended) The system according to claim [27] 28, wherein the second user display interface provides access to the database and wherein, in response to accessing, the system displays an image and/or medical data on the second user display interface.

38. (Amended) A syringe for simulating fluid delivery, comprising:
a housing defining a lumen comprising an opening for delivering a fluid;
a pushing element for pushing the fluid through the opening;
a friction-producing element within the lumen of the housing in communication with the pushing element; and
a motor within the lumen of the housing and in communication with the friction-producing element and comprising a signal-receiving element,
wherein the friction-producing element causes friction between the pushing element and a surface of the lumen of the housing upon activation [by] of the motor in response to a signal received by the signal-receiving element.

44. (Amended) The system according to claim 1, further comprising a [the] syringe [of] for simulating fluid delivery, the syringe comprising:
a housing defining a lumen comprising an opening for delivering a fluid;
a pushing element for pushing the fluid through the opening;
a friction-producing element in communication with the pushing element;
and
a motor in communication with the friction-producing element and comprising a signal-receiving element,
wherein the friction-producing element causes friction between the pushing element and a surface of the lumen of the housing upon activation by the motor in response to a signal received by the signal-receiving element, and further
wherein the opening of the syringe is connectable to a connecting piece having a first end for receiving fluid from the opening and a second end for

delivering fluid to a simulated body cavity or body lumen in the manikin.

45. (Amended) A balloon-inflating device for simulating deployment of a balloon within a body cavity or lumen of a patient, comprising:

a delivery mechanism for controlling delivery of fluid through the balloon-inflating device to the balloon;

a pressure sensor for monitoring pressure of a fluid delivered to the balloon by the balloon-inflating device;

an electrical pressure meter for reading pressure determined by the pressure sensor, the electrical pressure meter being connectable to a processor and for transmitting a signal corresponding to a pressure value to the processor and an automatic control system for controlling the amount of pressure delivered to the balloon.

46. (Amended) The system according to claim 1, further comprising a balloon-inflating device for simulating deployment of a balloon within the body cavity or lumen of the patient, the balloon-inflating device comprising:

a delivery mechanism for controlling delivery of fluid through the balloon-inflating device to the balloon;

a pressure sensor for monitoring pressure of a fluid delivered to the balloon by the balloon-inflating device;

an electrical pressure meter for reading pressure determined by the pressure sensor, the electrical pressure meter being connectable to a processor and for transmitting a signal corresponding to a pressure value to the processor.

46. (Amended) The system according to claim 1, further comprising [the] a balloon-inflating device [of claim 45] for simulating deployment of a balloon within the body cavity or lumen of the patient, the balloon-inflating device comprising:
a delivery mechanism for controlling delivery of fluid through the balloon-inflating device to the balloon;
a pressure sensor for monitoring pressure of a fluid delivered to the balloon by the balloon-inflating device;
an electrical pressure meter for reading pressure determined by the pressure sensor, the electrical pressure meter being connectable to a processor and for transmitting a signal corresponding to a pressure value to the processor.

65. (Amended) A method for simulating deployment of a balloon within a body cavity or lumen of a patient, comprising:
(a) providing a balloon-inflating device, comprising:
a delivery mechanism for controlling delivery of a fluid through the balloon-inflating device to the balloon;
a pressure sensor for monitoring pressure of a fluid delivered to the balloon by the balloon-inflating device;
an electrical pressure meter for reading pressure determined by the pressure sensor and for transmitting a signal corresponding to a pressure value to a processor; and
an automatic control system for controlling the amount of pressure delivered to the balloon;
(b) providing a system comprising:
a processor for receiving the signal, the processor connectable to the network; and

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Amendment and Response to Non-Final Office Action

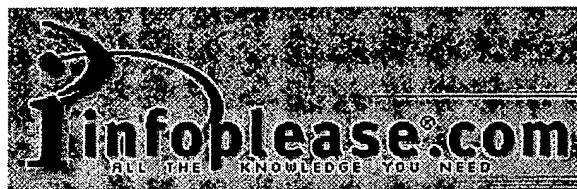
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a user device comprising an interface displaying a representation of the
balloon

within a simulated body cavity or lumen; and

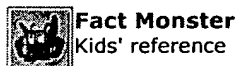
- (c) delivering the fluid to the balloon; wherein deployment of the balloon in response to the delivering is displayed on the user device.

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flu·id

Pronunciation: (floo'id), [key]—*n.*

a substance, as a liquid or gas, that is capable of flowing and that changes its shape at a steady rate when acted upon by a force tending to change its shape.

—*adj.*

1. pertaining to a substance that easily changes its shape; capable of flowing.
2. consisting of or pertaining to fluids.
3. changing readily; shifting; not fixed, stable, or rigid: *fluid movements*.
4. convertible into cash: *fluid assets*.

